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ABSTRACT

A Delphi study was conducted among personnel of the Oklahoma Research Coordinating Unit (RCU) to determine their priorities for long-term research in vocational education. Staff in Supportive Services were grouped together, while staff in the Occupational Division, Area Schools Division, Training for Industry Programs Section, and Productivity section made up another group called "Educational Services" since they have a more direct relationship with supervision of local programs. Each group of administrators was asked to list 10 concerns related to the improvement of vocational education programs that they felt should be analyzed by the RCU within the next 5 years. These lists were then compiled into questionnaires that were sent to the two groups, with instructions to rank each item on a scale of 1 to 10. As expected, the concerns of the Supportive Services Divisions differed from those of the Educational Services Divisions both in scope and priority. The Supportive Services Divisions were more concerned with the attitudes of students, industry, and the general public toward vocational education. One exception was the need for identifying new and emerging technologies, practices, and programs appropriate to vocational and technical training, which was the number one priority for both groups. Other areas included in the top 10 for both groups were determining the effectiveness of the program evaluation system, and using computers as teaching devices. The RCU now must decide whether to tackle the top priorities of each group, an area of lower priority that is a concern of both divisions, or a top priority that is vital to the functioning of a subdivision. (KC)

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RESEARCH: OKLAHOMANS LOOKING AHEAD

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INTRODUCTION

A major goal of the Research Unit is to improve vocational education programs in Oklahoma. Because research may entail considerable amounts of human and financial resources, it is oftentimes necessary to plan years ahead. Rather than identifying research priorities from an isolated point-of-view, the Research Unit opted to poll those staff members who are closely involved with the vocational programs and the instructors. The Delphi Technique was used to ascertain what areas of concern related to program improvement were uppermost in the minds of selected State Department of Vocational and Technical Education staff.

DESIGN AND METHODOLOGY

Separate Delphi studies were conducted because of differing relationships with vocational programs among the divisions. Staff in Supportive Services were grouped in one study, while staff in the Occupational Division, Area Schools Division, Training for Industry Programs (TIPS), and Productivity were grouped in the second study. The latter group will be referred to in this study as Educational Services since they have a more direct relationship with supervision of local programs.

Letters were sent to the administrative staff of the Supportive Services and Educational Services divisions explaining the scope of the studies and asking them to list a maximum of ten concerns or problems

related to the improvement of vocational education programs which they felt should be analyzed by the Research Unit within the next five years (Appendix A).

These lists were returned to the Research Unit and were compiled into two composite lists, one for each major division. The responses were grouped into broader areas when possible to provide more manageable lists of concerns. Questionnaire #2 (Appendices B and C) was then sent to the participants so that each topic could be rated on a 9-point continuum, with "1" referring to a concern having the greatest impact and "9" having the least amount of impact. (The worksheets were included so that the respondents could locate their original concerns if desired.) These ratings were entered into the computer, and means were established for each area of concern. The concerns were then ranked in descending order. These rankings were listed in Questionnaire #3 which was routed to the participants to determine whether they agreed with the rankings as derived (Appendices D and E). The participants were also instructed to rank those concerns that had been added or revised on the second questionnaire. Because the majority of the respondents accepted the rankings as presented on Questionnaire #3, no further rounds were deemed necessary. The response rates by individual divisions are listed in Table 1.

TABLE 1

RESPONSE RATES BY INDIVIDUAL DIVISIONS

Divisions	Responses/Questionnaires Sent		
Educational Services	Questionnaire #1	Questionnaire #2	Questionnaire #3
Agriculture	2/8	6/7	2/7
Business and Office	0/2	2/2	0/2
Distributive Education/Marketing	0/2	1/2	1/2
Health Occupations	0/2	0/2	0/2
Home Economics	4/7	5/7	7/7
Trade and Industrial	4/7	5/6	5/6
Training for Industry Programs	4/6	6/6	5/6
Area Schools	2/4	4/4	3/4
Employment and Training	3/3	2/3	3/3
Industrial Arts	0/1	1/1	0/1
Special Programs	2/4	4/4	3/4
Productivity	1/1	1/2	1/2
Total	22/47	37/46	30/46
Supportive Services	Questionnaire #1	Questionnaire #2	Questionnaire #3
Planning	3/3	3/3	2/3
Information Services	1/2	2/2	2/2
Office of Civil Rights	1/1	1/1	0/1
Educational Equity	1/1	1/1	1/1
Curriculum	11/17	13/17	15/17
Evaluation	2/3	3/3	3/3
Mobile Careers	0/1	0/1	1/1
VIEW	3/3	2/3	3/3
Regional Administrators	5/7	5/7	3/7
Total	27/38	30/38	30/38

DISCUSSION

As expected, the concerns of the Supportive Services divisions differed from those of the Educational Services divisions both in scope and priority as shown in Table 2. One exception was the need for identifying new and emerging technologies, practices, and/or programs appropriate to vocational and technical training, which was the number one priority for both groups. Other areas included in the top ten for both groups were 1) determining the effectiveness of the program evaluation system and 2) using computers as teaching devices. Obviously, the priorities will differ between divisions and even between individuals, depending upon their job functions, however, the list of concerns still serves as an effective planning tool.

The Supportive Services divisions were more concerned with the quality of the course content--the validity of both the cognitive and performance skills being taught. First, are the instructors teaching the right skills and secondly, how can they measure what the student has learned? The Educational Services divisions seemed more concerned with the attitudes of students, industry, and the general public towards vocational education.

Tables 3 and 4 depict the differences in rankings for the various subdivisions. Because of the small number of participants, there were tied rankings in many cases and these were given an average ranking.

For example, if three concerns tied for first priority, the ranking for each of the three would be a "2" instead of a "1". The fourth priority would still be ranked "4", assuming there was no tie.

The concerns were ranked according to the overall mean ratings. Those in Supportive Services could have been somewhat biased by the large number of respondents from the Curriculum Division. However, in analyzing the data, it would appear that only one of the top ten priorities (field testing the curriculum manuals) may have been placed there due to bias from one group.

Additional concerns were listed on Questionnaire #3 and were given ranks rather than ratings. A mean rank was computed for each subdivision and an overall mean rank was calculated. Because the ranks were determined by different methods, the concerns were not placed in the ranked lists themselves but were included at the end of Tables 3 and 4.

Many concerns were common to both groups although the degree of importance varied: perception of major industry and the general public towards vocational education; effects of career counseling, recruitment, and placement activities on student enrollment; relationship of involvement in student organizations to future job performance; State Department of Vocational and Technical Education (SDVTE) staff in-service needs; quality of instruction in high schools versus area vo-tech schools; and the recruitment and retention of quality instructors. A number of activities relating to the priorities are already in

progress:

1) A task force has been established to identify new technologies and programs appropriate to vocational training.

2) The Evaluation Unit has conducted a follow-up of the evaluation teams' 1980-81 recommendations for program improvement. The results are available upon request, although no formal report has been compiled.

3) The State Department of Vocational and Technical Education program evaluation system is currently being restructured and the Research Unit has played an active role in this effort. The new system should aid in determining quality of instruction, use of State Department of Vocational and Technical Education curriculum materials, and attainment of competency levels.

4) The Human Resources Division has queried the State Department of Vocational and Technical Education staff to identify in-service needs for FY 83. The Research Unit will be involved with the analysis.

5) The Research and Curriculum divisions are currently identifying occupational jobs and learning sequences for ten trade and industrial program areas.

It was concluded that the two major divisions differed somewhat in their perception of the best vehicle for promoting program improvement. There were also differing viewpoints between the subdivisions, as was expected due to the varying job functions. The problem confronting the Research Unit (and administration, which will make the final decision) is whether to tackle the top priorities of each major group, an area of lower priority that is a concern of both divisions, or a top priority that is vital to the functioning of a subdivision. Many subdivisions are presently conducting their own surveys. The Research Unit is committed to serving as consultants for designing questionnaires, performing analyses, or providing other research functions as requested.

TABLE 2

TOP TEN PRIORITY CONCERNS BY MAJOR DIVISIONS

Supportive Services			Educational Services		
Rank	Mean	Research Problem	Rank	Mean	Research Problem
1	2.4138	Identify new technology and/or programs appropriate to vo-tech training.	1	2.0263	Identify new and emerging technologies and industry practices appropriate to vo-tech training and retraining.
2	2.4286	Research the quality of instruction taking place in vocational programs throughout the state.	2	3.2632	Research the effectiveness of supervisory visitations and team evaluations.
3.5	2.6207	Evaluate the effectiveness of the CIMC package of curriculum materials: competency profile, curriculum manual, learning activity packet, media, and SOCAT test.	3	3.4211	Determine perceptions of major industries and the general public toward vocational education in Oklahoma.
3.5	2.6207	Identify effects of competency profiles.	4	3.5526	Analyze the State Department of Vocational and Technical Education's ability to respond to immediate training needs in the workplace.
5	2.6897	Relate programs to jobs for which they specifically train.			
6	2.8276	Validate competency performance tests.	5	3.7105	Survey former vocational students to determine their attitudes toward the vocational training they received.
7	2.9310	Develop competency performance tests.			

Table 2 (Continued)

Supportive Services			Educational Services		
Rank	Mean	Research Problem	Rank	Mean	Research Problem
8	3.0690	Continue field testing of curriculum manuals for validity.	6	3.7632	Conduct a follow-up of the SDVTE evaluation teams' recommendations for program improvement to determine what percentage of the suggested improvements have been put into effect.
9	3.1379	Research the effectiveness of the State Department of Vocational and Technical Education program evaluation system.	7	3.9211	Identify reasons for declining enrollments in specific vocational programs.
10.5	3.4138	Combine programs with duplication of information and use modular programming with computer-based instruction and student articulation control monitored by computerization, e.g. auto mechanics, diesel, farm equipment repair, small engine.	8	3.9474	Explore in depth the utilization of computers in industrial application (manufacturing process control, etc.
10.5	3.4138	Identify criteria for establishment or continuation of a vocational program.	9	4.0000	Research the impact that the increasing availability home computers may have on vocational education, e.g. training programs, delivery systems.
			10	4.1053	Identify the effects of recruitment and placement activities on students' program selections.

TABLE 3

CONCERNS AS RANKED BY SUPPORTIVE SERVICES SUBDIVISIONS

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Identify new technology and/or programs appropriate to vo-tech training.	2.4138	1	5	14.5	1	16.5	3.5	4	3	5
Research the quality of instruction taking place in vocational programs throughout the state.	2.4286	2	5	6	5	1	5	4	6.5	5
Evaluate the effectiveness of the CIMC package of curriculum materials: competency profile, curriculum manual, learning activity packets, media, and SOCAT test.	2.6207	3.5	2	6	3	5.5	6.5	16.5	14.5	5
Identify effects of competency profiles.	2.6207	3.5	5	6	6	7.5	3.5	11	3	13.5
Relate programs to jobs for which they specifically train.	2.6897	5	12	14.5	4	12	8.5	4	1	5
Validate competency performance tests.	2.8276	6	2	14.5	12.5	3	1	11	14.5	20

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan (3)	Inf. Serv. (1)
Develop competency performance tests.	2.9310	7	2	14.5	9.5	3	2	11	26	30.5
Continue field testing of curriculum manuals for validity.	3.0690	8	12	6	2	30.5	6.5	23	10	23
Research the effectiveness of the State Department of Vocational and Technical Education program evaluation system.	3.1379	9	12	30.5	7.5	12	8.5	11	3	5
Combine programs with duplication of information and use modular programming with computer-based instruction and student articulation control monitored by computerization, e.g. auto mechanics, diesel, farm equipment repair, small engine.	3.4138	10.5	18	6	7.5	9	21.5	4	20.5	26.5
Identify criteria for establishment or continuation of a vocational program.	3.4138	10.5	22	30.5	9.5	3	15.5	11	14.5	5

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Conduct a trade analysis by occupational breakdown showing occupations in each program covered by vo-tech education in Oklahoma, ranked from highest skilled to lowest.	3.6207	12	26.5	18	14.5	7.5	15.5	11	14.5	13.5
Identify recruitment and support programs for top quality teachers.	3.6552	13	12	6	11	25.5	19	23	6.5	26.5
Determine to what extent vocational offerings enhance industrial growth in a community.	3.7241	14	22	30.5	12.5	5.5	15.5	19	6.5	26.5
Research the delivery system for business and industry training.	3.9310	15	12	30.5	18.5	22	10	16.5	14.5	26.5
Determine perception of major industries and the general public toward vocational education. (Knowledge of voc-ed perceived quality.)	4.0345	16	22	30.5	18.5	22	10	16.5	14.5	26.5

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Determine the impact and effectiveness of mainstreaming as opposed to separate programs for the disadvantaged and handicapped.	4.1034	17	18	14.5	28.5	12	12.5	4	20.5	5
Conduct cost-benefit analysis of programs.	4.1724	18	18	30.5	22	12	15.5	28.5	10	20
Identify predictive measures for program success to use as selection criteria for program placement.	4.2759	19	7.5	20.5	23	16.5	31	4	29.5	13.5
Identify State Department of Vocational and Technical Education staff's areas of greatest need for personal and professional development.	4.3448	20	18	20.5	21	25.5	12.5	33	20.5	13.5
Identify the effects of career counseling on student enrollment.	4.5517	21	7.5	14.5	31	30.5	21.5	16.5	20.5	20
Identify effects of nontraditional enrollment.	4.5862	22.5	31.5	6	26	25.5	36	4	20.5	5

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Determine the feasibility of a statewide advisory committee for each occupational division.	4.5862	22.5	31.5	20.5	14.5	33	37	23	24.5	13.5
Conduct research on funding of vocational education.	4.6552	24	26.5	6	25	28.5	34.5	23	14.5	13.5
Relate involvement in youth group activities with student placement in related occupation.	4.8621	25.5	26.5	6	28.5	28.5	24	28.5	31.5	20
Conduct a frequency-of-use analysis of instructional materials including those available outside of the State Department of Vocational and Technical Education.	4.8621	25.5	31.5	30.5	18.5	16.5	28	36.5	34	34
Examine the acceptance of statewide training program concept (meat processing, truck driver training, equine production and management) to identify effects.	4.8966	27	26.5	30.5	16	34.5	24	33	28	34

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Test validity of student and employer follow-up through a parallel study.	4.9655	28	18	23	33.5	12	28	23	31.5	5
Determine whether T & I secondary courses can be taught with effectiveness using less than the three-hour block.	5.0345	29	36	30.5	35	19.5	11	16.5	20.5	34
Analyze various delivery systems for career information.	5.1034	30	12	6	37	36.5	19	11	29.5	30.5
Relate present maximum enrollment figures to individual student achievement.	5.1429	31	26.5	20.5	28.5	19.5	33	23	36	26.5
Provide research base for AVTS management.	5.1724	32	31.5	30.5	24	22	34.5	28.5	24.5	37
Identify effects of moving vocational programs from high schools to area vocational schools.	5.2414	33	35	30.5	36	22	24	36.5	10	26.5

Table 3 (Continued)

Research Problem	Overall Mean	Overall Rank	VIEW (2)	Ed. Eq. (1)	CIMC (13)	Eval. (3)	Reg. Adm. (5)	OCR (1)	Plan. (3)	Inf. Serv. (1)
Conduct long-term follow-up of vocational students.	5.2759	34.5	34	30.5	32	25.5	32	28.5	27	13.5
Analyze the content, development, and effectiveness of the VIEW system.	5.2759	34.5	26.5	6	33.5	32	19	33	34	34
Evaluate the process for developing curriculum manuals.	5.3103	36.5	37	30.5	18.5	36.5	28	33	34	34
Identify new unbiased sources for supply and demand as well as salary information.	5.3103	36.5	12	30.5	28.5	34.5	28	23	37	13.5

NOTE: The following concern was not rated on the 9-point continuum and therefore only the overall rank and subdivision ranks are listed. Because a mean rating was not calculated, the concern was not included in the ranked list.

Table 3 (Continued)

Research Problem	Overall Rank	Mobile Careers (1)	VIEW (3)	Ed. Eq. (1)	CIMC (14)	Eval. (3)	Reg. Adm. (1)	OCR (1)	Plan. (2)	Inf. Serv. (2)
Determine how well the LEA's are designing the appropriate educational setting (including needed support services, etc.) in order to enable the handicapped student to benefit from a program of instruction.	22.3	21	13.5	23	26.3	21.7	37	-	14	10

TABLE 4

CONCERNS AS RANKED BY EDUCATIONAL SERVICES SUBDIVISIONS

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Identify new and emerging technologies and industry practices appropriate to vo-tech training and re-training.	2.0263	1	8.5	1	2.5	7.5	2	1	1	1	3.5	2	1.5
Research the effectiveness of supervisory visitations and team evaluations.	3.2632	2	2.5	10	13	2	14.5	3	7.5	13	18.5	2	1.5
Determine perception of major industries and the general public toward vocational education in Oklahoma.	3.4211	3	16.5	2	10	31	3	2	3	9	28.5	25.5	10
Analyze the SDVTE's ability to respond to immediate training needs in the workplace.	3.5526	4	14.5	5.5	2.5	7.5	22.5	23.5	2	3.5	11	6	18.5

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Survey former vocational students to determine their attitude toward the vocational training they received.	3.7105	5	8.5	12	10	7.5	4.5	14	6	15	3.5	12.5	5.5
Conduct a follow-up of the SDVTE's evaluation teams' recommendations for program improvement to determine what percentage of the suggested improvements have been put into effect.	3.7632	6	11.5	8	16	2	7.5	6	13.5	9	11	2	25
Identify reasons for declining enrollments in specific vocational programs.	3.9211	7	8.5	18	16	31	1	9	5	18.5	3.5	7.5	29
Explore in depth the utilization of computers in industrial application (manufacturing process control, etc.)	3.9474	8	22	3	2.5	14.5	11	12.5	7.5	18.5	3.5	7.5	10

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Research the impact that the increasing availability of home computers may have on vocational education, e.g. training programs, delivery systems.	4.0000	9	8.5	5.5	19.5	24	11	21.5	9	2	11	19	10
Identify the factors affecting vocational education enrollment in comprehensive high schools at the 3rd and 4th year levels.	4.3421	11	4.5	27	19.5	7.5	6	5	19	6.5	11	24.5	25
Identify educational factors which have contributed to the success of very successful people.	4.3947	12	11.5	22	22.5	19	7.5	16.5	17	5	24	12.5	15.5
Research how to more effectively use Planning Division's data.	4.4211	13	24.5	24.5	28	2	17.5	11	4	24	18.5	4	25

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Identify the most effective methods of promoting individualized instruction in vocational programs.	4.5263	14	4.5	22	24.5	31	11	9	26	11.5	3.5	24.5	5.5
Survey former vocational students to determine their perception of the importance of the vocational student organization to their present employment situation.	4.6053	15.5	2.5	15	13	7.5	11	23.5	26	21	18.5	32	10
Identify the optimum methods for providing vocational education through the State Department of Vo-Tech to dropouts ages 14-20.	4.6053	15.5	30	4	6.5	19	17.5	19	15.5	6.5	18.5	22	18.5
Survey the unemployed members of the labor force to determine their vocational education background.	4.6579	17	28	8	19.5	19	17.5	26	11	15	18.5	6	21.5

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Analyze the feasibility of using computer-assisted videotape learning modules.	4.7368	18.5	20	12	26	14.5	20.5	26	11	9	11	20	21.5
Identify reasons why vocational instructors are leaving the field of education. (Higher pay, more benefits from industry, burnout).	4.7368	18.5	13	12	22.5	4	14.5	12.5	19	29	18.5	12.5	25
Study the feasible funding gap between high school and area school programs.	4.7838	20	1	27	6.5	19	25	9	30	26	24	22	3.5
Conduct a comparative study of the quality of education received in an area school versus a comprehensive high school.	4.8421	21	20	8	33	7.5	22.5	16.5	28.5	21	11	12.5	3.5

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Conduct a follow-up of handicapped students who have completed a vocational program to determine the rate of employment and type of employment.	4.9211	22	27	18	16	24	25	19	22	3.5	11	27	10
Conduct a comparative study of vo-tech graduates and graduates with no vo-tech training or training from the private sector.	4.9737	23	18	15	13	14.5	27.5	30	15.5	21	24	17.5	15.5
Identify the minimum standards that are not being met in comprehensive high school vocational programs.	5.0270	24	23	24.5	28	11.5	27.5	7	22	27	11	6	15.5
Describe the "state-of-the-art" of teachers' professional activities.	5.1714	25	16.5	22	19.5	24	29	15	28.5	17	11	12.5	31.5

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Construct a profile of the type of student who could best benefit from individualized instruction.	5.2632	26	24.5	15	31	31	17.5	26	19	11.5	3.5	25.5	31.5
Analyze the cost-effectiveness of broadcasting telecourses via satellite or cable as a way of expanding program offerings.	5.5263	27	32	27	2.5	14.5	33	28	13.5	24	31.5	9	10
Assess the feasibility of television conferencing with teachers.	5.8108	28	29	29	6.5	19	32	19	24	33	31.5	12.5	25
Conduct a follow-up of persons who received vocational training in an inmate training center and later returned to prison.	6.0541	29.5	20	20	24.5	31	30	30	32.5	24	24	29	15.5
Survey attitudes of students toward employment in home economics related occupations.	6.0541	29.5	26	31.5	10	24	20.5	21.5	31	31	28.5	29	29

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (6)	Area Schools (4)	B/O (2)	DE (1)	Home Ec. (5)	T & I (5)	TIPS (6)	Spec. Pro. (4)	Ind. Arts (1)	Prod. (2)	Employ. Trng. (2)
Survey members of Future Homemakers of America to determine other youth organizations.	6.1622	31	6	31.5	28	24	17.5	33	32.5	31	33	33	20
Determine if there is a strong correlation between Maslow's hierarchy of needs level for students and their grade point average.	6.3421	32	33	31.5	31	27.5	25	32	22	31	28.5	17.5	29
Identify insurance companies in Oklahoma that will not insure cooperative students under age 18.	6.5789	33	31	31.5	31	27.5	31	30	26	28	28.5	29	33

NOTE: The following concerns were not rated on the 9-point continuum and therefore only the overall ranks and subdivision ranks are given. Because mean ratings were not calculated, the concerns were not included in the ranked list.

Table 4 (Continued)

Research Problem	Overall Mean	Overall Rank	Ag (2)	Area Schools (3)	B/O (0)	DE (1)	Home Ec. (4)	T & I (5)	TIPS (5)	Spec. Pro. (3)	Ind. Arts (0)	Prod. (1)	Employ. Trng. (3)
Identify SDVTE's staffing needs for the next five years.	-	10.4	4.5	15.3	-	-	12.1	10.1	10.0	11.7	-	15	8.3
Identify methods by which vocational education can best utilize computer-based instruction.	-	13.4	14.5	17.7	-	-	18.1	11.2	13.9	13.7	-	6	13
Research the effectiveness of using Planning Division's data to determine the types of programs to be funded.	-	13.8	7.5	18	-	1	17.7	19.9	15.1	5.7	-	10	8.3

APPENDIX A

QUESTIONNAIRE #1

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

MEMORANDUM

TO: Selected Supportive Services and Educational Services Staff

FROM: Sheila Stone

DATE: March 25, 1982

SUBJECT: Research Priorities

The Research Unit is currently in the process of formulating the research problems which need to be addressed in the next five years. In order to get a broader perspective and to ensure that the most timely problems are identified, we are asking selected SDVTE staff to assist us in the planning process. This particular study is limited to the Supportive Services and Educational Services Divisions.

Because setting meeting times conducive to everyone's schedule is difficult, the Delphi Technique will be used. This technique is useful for gathering opinions from persons like yourself who are knowledgable in specific areas without taking up blocks of time for meetings. Successive questionnaires and feedback are necessary, with each questionnaire being designed to produce more of a group consensus. At least three separate questionnaires will be used to gather and finalize your opinions.

Questionnaire No. 1	A major goal of the Research Unit is to improve vocational education in Oklahoma. With this in mind, what researchable problems do you think should be attacked by the Research Unit in the next five years?
Questionnaire No. 2	A list of problems will be compiled and routed back to you. Using this list, you will be asked to evaluate or rank each item according to importance.
Questionnaire No. 3	A list of priority factors will be compiled from the consensus obtained in Step 2. You will be asked to either revise your opinion to be in line with the priority list or specify your reasons for remaining outside the consensus.

From the response obtained in Step 3, a final list and any minority reports will be sent out. This final list will be used to help plan the research activities for the coming years.

In order to keep within the time frame allowed, we are asking that the attached questionnaire be returned by April 7, 1982. We hope that you will agree to participate with us in this effort to plan for our role in the improvement of vocational education in Oklahoma.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

QUESTIONNAIRE NUMBER ONE

RETURN BY April 7, 1982

NAME: _____

A major goal of the Research Unit is to improve vocational education in Oklahoma. With this in mind, what researchable problems do you think should be attacked by the Research Unit in the next five years?

1.

2.

3.

4.

5.

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7.

8.

9.

10.

APPENDIX B

QUESTIONNAIRE #2: SUPPORTIVE SERVICES

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

April 28, 1982

MEMORANDUM

TO: Selected Supportive Services Staff

FROM: Don Frazier and Sheila Stone

SUBJECT: Questionnaire No. 2 of Delphi Study

Thank you for completing the first of three questionnaires to be used to identify research problems which need to be addressed by the Research Division in the next five years. Your suggestions were very enlightening. We hope that you will continue to assist us in determining the most relevant and feasible problems to undertake.

Questionnaire No. 2 lists the major researchable problems that were identified from the concerns you expressed. In order for us to determine which of the research areas are of utmost importance, we are asking that you rank each of them on a nine-point continuum. The highest-ranked factors chosen by the Supportive Services Division will be used to help establish research priorities for the next five years. Obviously, all of the areas cannot be studied due to limited resources. However, since a major objective of the Research Division is to promote program improvement, those research problems which would most likely meet this goal should be undertaken regardless of the time or money involved. Therefore, give a higher ranking to those few topics that you feel could make the greatest impact on program improvement.

To avoid presenting you with a formidable list of topics to rank, we have consolidated them into broader research areas. Our worksheet is attached so that you can locate your original suggestions. If you feel that your concern was not included in the broader categories, please write the research problem in the space provided at the end of the questionnaire, give it a ranking, and state your reasons for its inclusion as a separate research area.

All questionnaires need to be returned by May 7, 1982, to allow us to stay within the time frame. Your prompt response would be very much appreciated. Thank you again for your help.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

SS

Name: _____

QUESTIONNAIRE NO. 2

Here is a list of the research areas derived from the problems and concerns that you and others suggested we consider while planning the Research Division's priorities for the next five years. In order for us to determine which of the research areas are of utmost importance, we are asking that you rank each of them on a 9-point continuum, ranging from those having the greatest impact on program improvement (1) to those having the least impact (9).

Please be selective. Spread your rankings; don't group them. Obviously some of the areas will not affect program improvement as much as others.

E X A M P L E	Circle the ranking Greatest Impact … Least Impact
Research area which would most likely have a great impact on program improvement.	1 (2) 3 4 5 6 7 8 9
Research area which would have more impact than some but less than others.	1 2 3 4 (5) 6 7 8 9
Research area which would not affect program improvement or would have a substantially less impact than the others on the list.	1 2 3 4 5 6 7 (8) 9
1. Continue field-testing of curriculum manuals for validity.	1 2 3 4 5 6 7 8 9
2. Evaluate the process for development of curriculum manuals.	1 2 3 4 5 6 7 8 9
3. Evaluate the effectiveness of the CIMC package of curriculum materials: competency profile, curriculum manual, learning activity packet, media, and SOCAT test.	1 2 3 4 5 6 7 8 9
4. Identify effects of competency profiles.	1 2 3 4 5 6 7 8 9
5. Relate programs to jobs for which they specifically train.	1 2 3 4 5 6 7 8 9
6. Conduct a trade analysis by occupational breakdown showing occupations in each program covered by vo-tech education in Oklahoma ranked from highest skilled to lowest.	1 2 3 4 5 6 7 8 9

7.	Develop competency performance tests.	1 2 3 4 5 6 7 8 9
8.	Validate competency performance tests.	1 2 3 4 5 6 7 8 9
9.	Research the effectiveness of the SDVTE program evaluation system.	1 2 3 4 5 6 7 8 9
10.	Research the quality of instruction taking place in vocational programs throughout the state.	1 2 3 4 5 6 7 8 9
11.	Analyze the content, development, and effectiveness of the VIEW system.	1 2 3 4 5 6 7 8 9
12.	Identify the effects of career counseling on student enrollment.	1 2 3 4 5 6 7 8 9
13.	Analyze various delivery systems for career information.	1 2 3 4 5 6 7 8 9
14.	Identify criteria for establishment or continuation of a vocational program.	1 2 3 4 5 6 7 8 9
15.	Identify effects of moving vocational programs from high schools to vocational schools.	1 2 3 4 5 6 7 8 9
16.	Identify new unbiased sources for supply and demand as well as salary information.	1 2 3 4 5 6 7 8 9
17.	Conduct long-term follow-up of vocational students.	1 2 3 4 5 6 7 8 9
18.	Test validity of student and employer follow-up through a parallel study.	1 2 3 4 5 6 7 8 9
19.	Identify new technology and/or programs appropriate to vo-tech training.	1 2 3 4 5 6 7 8 9
20.	Research the delivery system for business and industry training.	1 2 3 4 5 6 7 8 9
21.	Determine to what extent vocational offerings enhance industrial growth in a community.	1 2 3 4 5 6 7 8 9
22.	Identify effects of nontraditional enrollment.	1 2 3 4 5 6 7 8 9
23.	Determine the impact and effectiveness of mainstreaming as opposed to separate programs for the disadvantaged and handicapped.	1 2 3 4 5 6 7 8 9
24.	Conduct cost-benefit analysis of programs.	1 2 3 4 5 6 7 8 9
25.	Conduct research on funding of vocational education.	1 2 3 4 5 6 7 8 9

26.	Provide research base for AVTS management.	1 2 3 4 5 6 7 8 9
27.	Determine perceptions of major industries and the general public towards vocational education. (Knowledge of voc-ed perceived quality.)	1 2 3 4 5 6 7 8 9
28.	Determine whether T & I secondary courses can be taught with effectiveness using less than the three-hour block.	1 2 3 4 5 6 7 8 9
29.	Examine the acceptance of statewide training program concept (meat processing, truck driver training, horse production and management) to identify effects.	1 2 3 4 5 6 7 8 9
30.	Conduct a frequency-of-use analysis of instructional materials including those available outside of the SDVTE.	1 2 3 4 5 6 7 8 9
31.	Combine programs with duplication of information and use modular programming with computer-based instruction and student articulation control monitored by computerization, e.g. auto mechanics, diesel, farm equipment repair, small engine.	1 2 3 4 5 6 7 8 9
32.	Identify recruitment and support programs for top quality teachers.	1 2 3 4 5 6 7 8 9
33.	Identify SDVTE staff's areas of greatest need for personal and professional development.	1 2 3 4 5 6 7 8 9
34.	Relate involvement in youth group activities with student placement in related occupations.	1 2 3 4 5 6 7 8 9
35.	Determine feasibility of a statewide advisory committee for each occupational division.	1 2 3 4 5 6 7 8 9
36.	Identify predictive measures for program success to use as selection criteria for program placement.	1 2 3 4 5 6 7 8 9
37.	Relate present maximum enrollment figures to individual student achievement.	1 2 3 4 5 6 7 8 9

If you feel that your concern was not included in these broader areas, please write the research problem in the space provided, circle the proper ranking, and state your reasons for including it as a separate research area.

1.

1 2 3 4 5 6 7 8 9

Reason:

2.

1 2 3 4 5 6 7 8 9

Reason:

C O M M E N T S:

WORKSHEET

CATEGORIZING PROBLEMS INTO RESEARCH AREAS

Research in the Development and Use of Instructional Materials

1. Continue field testing of curriculum manuals for validity.

   Curriculum reviews.

   Field test farm business management curriculum.

   Validate CIMC materials for use in the classroom.

2. Evaluate the procedures for developing curriculum manuals.

   To establish the feasibility and the procedures for conducting job-analysis validation for identified curriculum priorities.

   Follow-up of completors of AVTS farm business management programs to determine if they are using management tools taught in the program and if the program meets their farm business and family's objectives.

   Selection/training of committee members. What types of teachers are most effective? Industry representatives?

3. Evaluate the effectiveness of the CIMC package of curriculum materials.

   Field test the total instructional system developed by the CIMC, which would include competency profile, curriculum manual, learning activity packet (LAPs), media, and SOCAT test.

   Validate effectiveness of CIMC instructional system, i.e. manuals, media, competency profiles, LAPs, etc.

   To determine the acceptance and usefulness of media being developed by the CIMC. This process would assess the degree of use and identify advantages to make recommendations for continued development and modification of procedures being used for development.

4. Identify effects of competency profiles.

   Determine the usability of the competency profiles as determined by instructors, administrators, and industry.

   Validate effectiveness of competency profiles.

5. Relate programs to jobs for which they train.

   We need to identify the occupations for which we are training.

   Job tasks as referred to vocational occupations continued.

6. Conduct a trade analysis by occupational breakdown showing occupations in each program area covered by vocational education in Oklahoma, ranked from the highest skilled to the lowest.

   Occupational sequencing.

   To determine the acceptance and feasibility of occupational sequencing for training adults.

Research in Program Evaluation and Improvement

7. Develop competency performance tests.

8. Validate competency performance tests.

   Develop/validate competency occupational tests for all occupational areas.

   To determine the acceptance of competency achievement testing as determined by industry and school administrators.

   Competency achievement testing for graduates.

   Testing unit development and functions.

   Competency and performance evaluation.

9. Research the effectiveness of the State Department of Vocational-Technical Education program evaluation system.

   Value of state evaluation process for secondary and post-secondary accreditation.

   Provide input into and assist in development of competency-based evaluation.

   Effectiveness of evaluations--determine the impact of state evaluations on program improvement.

   Evaluation validity.

   Is there merit in changing evaluation of vocational programs to more objective-type approach?

10. Research the quality of instruction taking place in the vocational programs throughout the state.

    Instructional quality.

    Motivation of students.

    Correct instructional methods.

    How well the principle of training of the adult learner is being utilized.

    Instructors current in new technology.

    Techniques or methods of holding students' attention.

    Are the schools sending instructors to technical schools for updating in new equipment?

Guidance, Counseling, and Career Information Research

11. Analyze the content, development, and effectiveness of the VIEW system.

    What kinds of career information do students and guidance personnel want to have access to through a program like VIEW, i.e. descriptions of general career areas (auto mechanics, plumbing, accounting, etc.) or descriptions of the subparts of these areas also (front-end mechanic, diesel mechanic, auditor, etc.)

    What kind of information is presently used in area schools in Oklahoma that we could use in VIEW? Is there a way to find out what they tell their prospective graduates about demand and salary?

    How can we best apply the research you're now doing with curriculum on job breakouts by program to the information we include in VIEW?

    How could we best use the data gathered by Information Services on follow-up of graduates in VIEW?

    Alternate systems or methods of collecting job openings and demand information other than OSES.

12. Identify effects of career counseling on student enrollment.

    Career counseling related to placement in programs.

13. Analyze various delivery systems for career information.

    Emerging career-information delivery systems other than microcomputer.

Comparison of career-information delivery systems.

Microcomputer as a delivery system for career information.

Research Related to Planning

14. Identify criteria for establishment or continuation of a vocational program.

    Program justification.

    Trade skills that should be phased out.

    Survey AVTS not presently offering Farm Business Management to determine if there is a need for a program in the area.

    Identification of the priority populations for vo-tech to serve through our training institutions.

    Identify programs for implementation that would train students for higher-paying occupations.

    Identify training-program areas which will best serve vo-tech trainees.

    Supply and demand for employment in existing or proposed programs.

15. Identify effects of moving vocational programs from high schools into area schools.

16. Identify new, unbiased sources for supply and demand as well as for salary information.

17. Conduct long-term follow-up of vocational students.

    Longitudinal studies of graduating students.

    Long-term follow-up--10 years, 5 years, etc.

18. Test validity of student and employer follow-up through a parallel study.

Research Related to Serving Business and Industry

19. Identify new technology and/or programs appropriate to vo-tech training.

Technological predictions, e.g., expectations of technology in next five years.

Analyze Oklahoma's job market over next five years--if we have met our peak in oil production, where will all of the people in the oil fields go.

Computer and its influence on the trades.

Technology transfer.

New and emerging occupations: what areas or fields?

Conduct research to determine what expansion or type of curriculum is needed in agri-business and large farming operations.

Research and explore what new occupational areas should be taught in the field of home economics.

Research new, emerging occupational areas to determine curriculum, length of training, and areas of state, etc.

High-technology training programs--industrial electricity, industrial maintenance, machine shop, etc.

Electronics and its impact on the automobile industry.

Curriculum up-date or revisions needed by T & I teachers.

20. Research the delivery system for business and industrial training.

Training for business and industry.

Articulation with industry training programs.

Industry professional organization involvement.

How can we fine-tune our system to the priority needs of business and industry?

Is equipment used to teach and train students preparing them for equipment they will be using in today's industry?

Delivery system to serve existing industry.

Conduct a state-wide industry/business survey to determine industry's perception, need, and knowledge of how the AVTS can serve industry.

Possibilities of working more closely with industry and business world, i.e., job-placement cooperation.

Industry participation (not advisory committees).

21. Determine to what extent vocational offerings enhance industrial growth in a community?

Research on Equities and Inequities

22. Identify effects of non-traditional enrollment.

    Why do males enrolled in traditionally female programs have such a high drop-out rate?

    Why are females rated higher than males in each category of employer evaluation, yet make substantially less money?

    Increase in males and females in non-traditional programs.

    A five-year follow-up study should report whether non-traditional graduates are working in occupations for which trained.

    Impact--disadvantaged, handicapped, sex equity.

23. Determine the impact and effectiveness of mainstreaming as opposed to separate programs for the disadvantaged and handicapped.

    Special training for disadvantaged and handicapped.

Other Research Areas Not Categorized Above

24. Conduct cost-benefit analysis of programs.

    Are we wasting our resources concentrating training at the secondary level rather than going after the adult student?

    Provide/develop a system for AVTS administrators to conduct a cost-effective system for their own programs.

    Conduct cost-benefit analysis in selected training programs. (Enrollment and completion versus cost of training; job placement versus cost of training.)

25. Conduct research on funding of vocational education.

    As federal funds diminish, how can we attract alternate sources of funding?

    Alternative funding procedures for financing local programs.

    Identify effective methods of communicating and working with the state legislature and congress for funding of vocational education.

Alternative means of funding vocational education other than state and federal sources.

Investigate the relative disparity in vocational funding (state, local, federal) between high schools and AVTS.

26. Provide research base for AVTS management.

    Management technique improvement in area schools.

    Accounting systems for budgeting purposes--computer programming that can be used on the local level--designed especially for area schools.

27. Determine perceptions of major industries and the general public toward vocational education.

    Prove value of vo-tech.

    Public-relations improvement of vo-tech education.

    How can we demonstrate the value of vo-tech to the state?

    How do the various publics in Oklahoma perceive the vo-tech system? (Public education, business and industry, chambers of commerce, vocational instructors, and students)

28. Determine if T & I secondary courses can be taught with effectiveness using less than the three-hour block.

29. Examine the acceptance of state-wide training program concept (meat processing, truck-driver training, horse production and management) to identify effects.

30. Conduct a frequency-of-use analysis of instructional materials including those available outside the State Department of Vocational and Technical Education. (Suggested for Business and Office programs.)

31. Combine programs with duplication of information and use modular programming with computer-based instruction and student-articulation control monitored by computerization, e.g., auto mechanics, diesel, farm equipment repair, small engine.

32. Identify recruitment and support programs for top-quality teachers.

33. Identify State Department of Vocational and Technical Education staff's areas of greatest need for personal and professional development.

34. Relate involvement in youth-group activities with student placement in related occupations.

35. Determine feasibility of a state-wide advisory committee for each occupational division.

36. Identify predictive measures for program success to use as selection criteria for program placement.

37. Relate present maximum enrollment figures to individual student achievement.

ITEMS NOT INCLUDED IN QUESTIONNAIRE NO. 2

The following comments are noted but are not included in Questionnaire No. 2 for the reasons stated below. We encourage those who made the comments to expand or explain them at the end of the questionnaire if they feel there is a problem to be researched which is not included in the items on the survey instrument.

Philosophical or legal questions deemed not researchable. (If these were implemented in some way, an evaluation or comparative research could then be conducted.)

1. Should high school students be able to attend high school classes at night?

2. Should vocational or pre-vocational courses be offered on a state-wide basis for graduates for grades 7-9?

3. Should state-adopted curriculum be provided to vocational programs for use free of charge? (Comment: If they are on the state-approved textbook list, they are provided free of charge to the student. In that case, the taxpayer would foot the bill whether manuals are furnished by the State Department or the LEA.)

4. Should pre-vocational classes be required or available to junior high students?

5. Should high school students be permitted to attend evening vocational adult programs on a noncredit, informational training basis? (Comment: They are permitted to attend at present if they pay the fees.)

6. Should high school students be permitted to attend evening vocational adult programs and receive high school credit?

7. Study the ramifications of formation of a unified state-wide area school district with central control for better utilization of transportation, equipment, programs, etc.

8. How can we facilitate articulation between vo-tech and higher education?

9. Are programs competency-based? (Comment: This definition surely depends on one's definition of competency-based. We believe they are not--under our definition--and can defend our position without research.)

10. How can we apply follow-up results to program improvement? Can or should this be done? Who can best do it, e.g., school, teacher, state office, etc.? (Comment: The State Department has been doing this for 12 years. Who should do it is largely a philosophical question.)

Comments on which we could not infer a problem or purpose--or which we did not understand the comment.

1. Reporting systems.

2. Staffing patterns (administration).

3. Short-term adult.

Questions where research is recent, data is presently available, or research efforts are on-going.

1. Supply and demand for employment in existing or proposed programs. (Comment: SOICC is responsible for furnishing the best data possible. Supply and demand data has been related to programs through the State Plan and the planning process for several years.)

2. The number and percentage of female students who enrolled in non-traditional vocational program who actually graduated from the program.

3. Look at the programs by race.

4. Follow-up of non-traditional students (78-79). Reason for enrollment. Determine percentage of those completing program, dropped, and reasons, etc. (Comment: Data from the Student Accounting System relating to items 2, 3, and 4 have been analyzed and can be further analyzed by Research staff on request with less than one week turn-around time. Reasons are not in the data; however, we hope reasons are included in the items on the survey under the Equity group.)

5. Compare follow-up on college-bound and non-college-bound graduates of vo-tech programs--salary, level to which they enjoy their work, amount of further training necessary to hold current position, etc.

6. Salary comparisons of students who were vocational and technical trained versus academic route. (Comment: A rather detailed nine-year follow-up including vocational and non-vocational students was conducted statewide four years ago. Results are available from the Research Division.)

7. Public relations improvement of vocational education. (Comment: A study was conducted to find out what the general public wants to know about vocational education. The study results are available from Research and probably also from the PI office.)

8. Oil industry--production and refining. (Comment: A study was completed by Haydon Battles in 1981 and additional study is currently being accomplished.)

9. Prove value of vo-tech.

10. How can we demonstrate the value of vocational-technical education to the state? (Comment: The two items above have been the topic of research in Oklahoma and in other states, and concentrated efforts are on-going by the National Center for Research in Vocational Education. Research is continuing.)

11. What do the locals feel are the major weaknesses in state-level administration of vo-tech as presently operated? (Comment: Ann Benson's study completed in 1978 is probably current to the problem. Results are available from Research or MAVCC.)

Not research items.

1. How could we start a field-test process? (Comment: Research staff have that expertise and would be happy to assist others with the process or conduct field tests according to priority.)

2. Continue working as advisor to graduate assistants. (Comment: We hope to continue influencing vocational leadership to base their work on sound research.)

APPENDIX C

QUESTIONNAIRE #2: EDUCATIONAL SERVICES

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

May 25, 1982

MEMORANDUM

TO: Selected Educational Services Staff

FROM: Don Frazier and Sheila Stone

SUBJECT: Questionnaire No. 2 of Delphi Study

Thank you for completing the first of three questionnaires to be used to identify research problems which need to be addressed by the Research Division in the next five years. Your suggestions were very enlightening. We hope that you will continue to assist us in determining the most relevant and feasible problems to undertake.

Questionnaire No. 2 lists the major researchable problems that were identified from the concerns you expressed. In order for us to determine which of the research areas are of utmost importance, we are asking that you rank each of them on a nine-point continuum. The highest-ranked factors will be used to help establish research priorities for the next five years. Obviously, all of the areas cannot be studied due to limited resources. However, since a major objective of the Research Division is to promote program improvement, those research problems which would most likely meet this goal should be undertaken regardless of the time and money involved. Therefore, give a higher ranking to those few topics that you feel could make the greatest impact on program improvement.

To avoid presenting you with a formidable list of topics to rank, we have consolidated them into broader research areas. Our worksheet is attached so that you can locate your original suggestions. If you feel that your concern was not included in the broader categories, please write the research problem in the space provided at the end of the questionnaire, give it a ranking, and state your reasons for its inclusion as a separate research area.

All questionnaires need to be returned by June 9, 1982, to allow us to stay within the time frame. Your prompt response would be very much appreciated. Thank you again for your help.

Name: _____

QUESTIONNAIRE NO. 2

Here is a list of the research areas derived from the problems and concerns that you and others suggested we consider while planning the Research Division's priorities for the next five years. In order for us to determine which of the research areas are of the utmost importance, we are asking that you rank each of them on a 9-point continuum ranging from those having the greatest impact on program improvement (1) to those having the least impact (9).

Please be selective. Spread your rankings; don't group them. Obviously, some of the areas will not affect program improvement as much as others.

E X A M P L E :	Circle the ranking Greatest Impact … Least Impact
Research area which would most likely have a great impact on program improvement.	1 (2) 3 4 5 6 7 8 9
Research area which would have more impact than some but less than others.	1 2 3 4 (5) 6 7 8 9
Research area which would not affect program improvement or would have a substantially less impact than the others on the list.	1 2 3 4 5 6 7 (8) 9
1. Determine perceptions of major industries and the general public toward vocational education in Oklahoma.	1 2 3 4 5 6 7 8 9
2. Identify the effects of recruitment and placement activities on students' program selections.	1 2 3 4 5 6 7 8 9
3. Identify new and emerging technologies and industry practices appropriate to vo-tech training or retraining.	1 2 3 4 5 6 7 8 9
4. Conduct a comparative study of vo-tech graduates and graduates with no vo-tech training or training from the private sector.	1 2 3 4 5 6 7 8 9
5. Survey attitudes of students toward employment in home economics related occupations.	1 2 3 4 5 6 7 8 9

6.	Identify reasons why vocational instructors are leaving the field of education (higher pay, more benefits from industry, burnout).	1 2 3 4 5 6 7 8 9
7.	Study the possible funding gap between high school and area school programs.	1 2 3 4 5 6 7 8 9
8.	Analyze the SDVTE's ability to respond to immediate training needs in the workplace.	1 2 3 4 5 6 7 8 9
9.	Analyze the cost-effectiveness of broadcasting telecourses via satellite or cable as a way of expanding program offerings.	1 2 3 4 5 6 7 8 9
10.	Assess the feasibility of television conferencing with teachers.	1 2 3 4 5 6 7 8 9
11.	Research the effectiveness of supervisory visitations and team evaluations.	1 2 3 4 5 6 7 8 9
12.	Survey former vocational students to determine their perception of the vocational student organizations to their present employment situation.	1 2 3 4 5 6 7 8 9
13.	Conduct a follow-up of handicapped students who have completed a vocational program to determine the rate of employment and type of employment.	1 2 3 4 5 6 7 8 9
14.	Construct a profile of the type of student who could best benefit from individualized instruction.	1 2 3 4 5 6 7 8 9
15.	Identify the most effective methods for promoting individualized instruction in vocational programs.	1 2 3 4 5 6 7 8 9
16.	Identify the minimum standards that are not being met in comprehensive high school vocational programs.	1 2 3 4 5 6 7 8 9
17.	Survey former vocational students to determine their attitude toward the vocational training they received.	1 2 3 4 5 6 7 8 9
18.	Conduct a comparative study of the quality of education received in an area school versus a comprehensive high school.	1 2 3 4 5 6 7 8 9

19.	Identify the optimum methods for providing vocational education through the State Department of Vo-Tech to dropouts aged 14 through 20.	1 2 3 4 5 6 7 8 9
20.	Identify the factors affecting vocational education enrollment in comprehensive high schools at the third and fourth year levels.	1 2 3 4 5 6 7 8 9
21.	Conduct a follow-up of persons who received vocational training in an inmate training center and later returned to prison.	1 2 3 4 5 6 7 8 9
22.	Identify reasons for declining enrollments in specific vocational programs.	1 2 3 4 5 6 7 8 9
23.	Identify insurance companies in Oklahoma that will <u>not</u> insure cooperative students under age 18.	1 2 3 4 5 6 7 8 9
24.	Research how to more effectively use Planning Division's data.	1 2 3 4 5 6 7 8 9
25.	Analyze the feasibility of using computer-assisted videotape learning modules.	1 2 3 4 5 6 7 8 9
26.	Identify educational factors which have contributed to the success of very successful people.	1 2 3 4 5 6 7 8 9
27.	Conduct a follow-up of the SDVTE's evaluation teams' recommendations for program improvement to determine what percentage of the suggested improvements have been put into effect.	1 2 3 4 5 6 7 8 9
28.	Survey the unemployed members of the labor force to determine their vocational education background.	1 2 3 4 5 6 7 8 9
29.	Determine if there is a strong correlation between Maslow's hierarchy of needs level for students and their grade point average.	1 2 3 4 5 6 7 8 9
30.	Explore in depth the utilization of computers in industrial applications (manufacturing process control, etc.).	1 2 3 4 5 6 7 8 9
31.	Survey members of Future Homemakers of America to determine their attitudes toward the competitive activities in other youth organizations.	1 2 3 4 5 6 7 8 9

32. Research the impact that the increasing availability of home computers may have on vocational education, e.g. training programs, delivery systems.	1 2 3 4 5 6 7 8 9
33. Describe the "state-of-the-art" of teachers' professional activities.	1 2 3 4 5 6 7 8 9

If you feel that your concern was not included in these broader areas, please write the research problem in the space provided, circle the proper ranking, and state your reasons for including it as a separate research area.

1. 1 2 3 4 5 6 7 8 9

Reason:

2. 1 2 3 4 5 6 7 8 9

Reason:

C O M M E N T S:

WORKSHEET

(In some instances, similar responses were grouped together as indicated below.)

1. Determine perceptions of major industries and the general public toward vocational education in Oklahoma.

   Vocational education's image with business and industry in Oklahoma.

   Administrators' view of vocational home economics and/or vocational programs in comprehensive high schools.

   Students' (those who are or have been enrolled in vocational classes and those who never had a vocational class) views of vocational education (AVTS and comprehensive high schools) in the next 10-15 years.

   What are the attitudes of industry toward students trained in vocational classes?

2. Identify the effects of recruitment and placement activities on students' program selections.

   Analysis of students' reasons for picking vocational programs, e.g. current rate of pay, job security, opportunity for advancement, working conditions, friends.

   Student recruitment and placement.

   Study how vo-ed programs are listed in high school curriculum catalogs.

3. Identify new and emerging technologies and industry practices appropriate to vo-tech training or retraining.

   Survey new, expanding, and existing manufacturing industries that are exerting or implementing a new thrust, i.e. a new product line requiring a new process, manufacturing technique, and/or equipment that would require the training or retraining of employees available through the TIPS Division.

   Projected need/demand for the types of vocational programs to be offered.

   New programs (what kind?)

   Identification of emerging occupations and programs needed.

   The types of high technology training needs that will be in existence 5-10 years in the future.

   We have no program ongoing to train people in the use of lasers or fiber optics. To what extent will these fields impact our society and industry in the next decade?

   Find expected program thrust in next 10 years.

3. (continued)

Home economics' place in the space program; nutrition and close living quarters in conjunction with the studies being done within the space program.

4. Conduct a comparative study of vo-tech graduates and graduates with no vo-tech training or training from the private sector.

Evaluation and comparison of vo-tech graduates and high school graduates with no vo-tech training.

Job satisfaction of vo-tech graduates versus non vo-tech graduates.

Compare graduates of vo-tech programs in high schools and AVTS with graduates of private vocational schools, i.e. salaries, ages, etc.

5. Survey attitudes of students toward employment in home economics-related occupations.

Attitudes of students toward employment in home economics-related occupations.

Students trained in clothing production are reluctant to go into the factories--how could this attitude be overcome?

6. Identify reasons why vocational instructors are leaving the field of education, e.g. higher pay, more benefits from industry, burnout, etc.

Teachers' pay versus industry pay (also benefits, etc.)

Teacher burnout.

Longevity of teachers (in the profession).

APPENDIX D

QUESTIONNAIRE #3: SUPPORTIVE SERVICES

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

May 21, 1982

MEMORANDUM

TO: Selected Supportive Services Staff

FROM: Sheila Stone

SUBJECT: Questionnaire No. 3 of Delphi Study

Thank you for your continued participation in the Delphi study of researchable problems concerning program improvement in vocational education. In this phase of the study we are asking that you review the rankings of the concerns as listed on the attached questionnaire. Each concern was ranked on a 9-point continuum ranging from greatest impact on program improvement (1) to least amount of impact (9). Therefore, those researchable problems considered as potentially having the greatest amount of impact on program improvement appear first in the ranked order.

If, after examining the ranked concerns, you feel that any of them should be placed significantly higher or lower on the list, please indicate your changes at the end of the questionnaire and state your reasons for the changes. In addition, there are three revised concerns prompted by input from Questionnaire No. 2 which need your attention.

We would like to have this questionnaire returned by June 4, 1982. If you have any questions concerning the study, please feel free to call. Thank you.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Name:_____

QUESTIONNAIRE NO. 3
(Rankings Derived from Questionnaire No. 2)

Rank	Research Problem	Mean
1	Identify new technology and/or programs appropriate to vo-tech training.	2.4138
2	Research the quality of instruction taking place in vocational programs throughout the state.	2.4286
3.5	Evaluate the effectiveness of the CIMC package of curriculum materials: competency profile, curriculum manual, learning activity packet, media, and SOCAT test.	2.6207
3.5	Identify effects of competency profiles.	2.6207
5	Relate programs to jobs for which they specifically train.	2.6897
6	Validate competency performance tests.	2.8276
7	Develop competency performance tests.	2.9310
8	Continue field testing of curriculum manuals for validity.	3.0690
9	Research the effectiveness of the SDVTE program evaluation system.	3.1379
10.5	Combine programs with duplication of information and use modular programming with computer-based instruction and student articulation control monitored by computerization, e.g. auto mechanics, diesel, farm equipment repair, small engine.	3.4138
10.5	Identify criteria for establishment or continuation of a vocational program.	3.4138
12	Conduct a trade analysis by occupational breakdown showing occupations in each program covered by vo-tech education in Oklahoma, ranked from highest skilled to lowest.	3.6207
13	Identify recruitment and support programs for top quality teachers.	3.6552
14	Determine to what extent vocational offerings enhance industrial growth in a community.	3.7241
15	Research the delivery system for business and industry training.	3.9310
16	Determine perceptions of major industries and the general public towards vocational education. (Knowledge of voc-ed perceived quality.)	4.0345

Rank	Research Problem	Mean
17	Determine the impact and effectiveness of mainstreaming as opposed to separate programs for the disadvantaged and handicapped.	4.1034
18	Conduct cost-benefit analysis of programs.	4.1724
19	Identify predictive measures for program success to use as selection criteria for program placement.	4.2759
20	Identify SDVTE staff's areas of greatest need for personal and professional development.	4.3448
21	Identify the effects of career counseling on student enrollment.	4.5517
22.5	Identify effects of nontraditional enrollment.	4.5862
22.5	Determine the feasibility of a statewide advisory committee for each occupational division.	4.5862
24	Conduct research on funding of vocational education.	4.6552
25.5	Relate involvement in youth group activities with student placement in related occupations.	4.8621
25.5	Conduct a frequency-of-use analysis of instructional materials including those available outside of the SDVTE.	4.8621
27	Examine the acceptance of statewide training program concept (meat processing, truck driver training, horse production and management) to identify effects.	4.8966
28	Test validity of student and employer follow-up through a parallel study.	4.9655
29	Determine whether T&I secondary courses can be taught with effectiveness using less than the three-hour block.	5.0345
30	Analyze various delivery systems for career information.	5.1034
31	Relate present maximum enrollment figures to individual student achievement.	5.1429
32	Provide research base for AVTS management.	5.1724
33	Identify effects of moving vocational programs from high schools to area vocational schools.	5.2414
34.5	Conduct long-term follow-up of vocational students.	5.2759
34.5	Analyze the content, development, and effectiveness of the VIEW system.	5.2759

Rank	Research Problem	Mean
36.5	Evaluate the process for developing curriculum manuals.	5.3103
36.5	Identify new unbiased sources for supply and demand as well as salary information.	5.3103

Write the rank number of the concern and your reason for raising or lowering the ranking.

Present Rank No.: _____

Preferred Ranking: _____

Reason for Ranking Change:

Present Rank No.: _____

Preferred Ranking: _____

Reason for Ranking Change:

Present Rank No.: _____

Preferred Ranking: _____

Reason for Ranking Change:

The following changes were suggested by respondents on Questionnaire No. 2:

It was suggested that the item ranked twenty-nine be changed to read "Determine whether T&I and other vocational secondary courses can be taught with effectiveness using less than the three-hour block."

Do you approve of this change? _____

Would you rank this item differently based on the wording change? _____ If so, where would you place it on the list?

* * * * * *

It was suggested that the ninth ranked item be changed to read "Research the effectiveness of the new SDVTE program evaluation system."

Do you approve of this change? _____

Would you rank this item differently based on the wording change? _____ If so, where would you place it on the list?

* * * * * *

It was suggested that the following researchable problem be added to the list:

"Determine how well the LEA's are designing the appropriate educational setting (including needed support services, etc.) in order to enable the handicapped student to benefit from a program of instruction."

Where would you place this item in the list of researchable problems based on impact on program improvement? _____

APPENDIX E

QUESTIONNAIRE #3: EDUCATIONAL SERVICES

OKLAHOMA STATE DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
FRANCIS TUTTLE, DIRECTOR • 1515 WEST SIXTH AVE., • STILLWATER, OKLAHOMA 74074 • A.C. (405) 377-2000

June 21, 1982

MEMORANDUM

TO: Selected Educational Services Staff

FROM: Sheila Stone

SUBJECT: Questionnaire No. 3 of Delphi Study

Thank you for your continued participation in the Delphi study of researchable problems concerning program improvement in vocational education. In this phase of the study we are asking that you review the rankings of the concerns as listed on the attached questionnaire. Each concern was ranked on a 9-point continuum ranging from greatest impact on program improvement (1) to least amount of impact (9). Therefore, those researchable problems considered as potentially having the greatest amount of impact on program improvement appear first in the ranked order.

If, after examining the ranked concerns, you feel that any of them should be placed significantly higher or lower on the list, please indicate your changes at the end of the questionnaire and state your reasons for the changes. In addition, there are three concerns prompted by input from Questionnaire No. 2 which need your attention.

We would like to have this questionnaire returned by July 2, 1982. If you have any questions concerning the study, please feel free to call. Thank you.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

Name: _____

QUESTIONNAIRE NO. 3
(Rankings Derived from Questionnaire No. 2)

Rank	Research Problem	Mean
1	Identify new and emerging technologies and industry practices appropriate to vo-tech training and retraining.	2.0263
2	Research the effectiveness of supervisory visitations and team evaluations.	3.2632
3	Determine perceptions of major industries and the general public toward vocational education in Oklahoma.	3.4211
4	Analyze the SDVTE's ability to respond to immediate training needs in the workplace.	3.5526
5	Survey former vocational students to determine their attitude toward the vocational training they received.	3.7105
6	Conduct a follow-up of the SDVTE's evaluation teams' recommendations for program improvement to determine what percentage of the suggested improvements have been put into effect.	3.7632
7	Identify reasons for declining enrollments in specific vocational programs.	3.9211
8	Explore in depth the utilization of computers in industrial application (manufacturing process control, etc.)	3.9474
9	Research the impact that the increasing availability of home computers may have on vocational education, e.g. training programs, delivery systems.	4.0000
10	Identify the effects of recruitment and placement activities on students' program selections.	4.1053
11	Identify the factors affecting vocational education enrollment in comprehensive high schools at the 3rd and 4th year levels.	4.3421
12	Identify educational factors which have contributed to the success of very successful people.	4.3947
13	Research how to more effectively use Planning Division's data.	4.4211
14	Identify the most effective methods for promoting individualized instruction in vocational programs.	4.5263
15.5	Survey former vocational students to determine their perception of the importance of the vocational student organization to their present employment situation.	4.6053

15.5	Identify the optimum methods for providing vocational education through the State Department of Vo-Tech to dropouts ages 14-20.	4.6053
17	Survey the unemployed members of the labor force to determine their vocational education background.	4.6579
18.5	Analyze the feasibility of using computer-assisted videotape learning modules.	4.7368
18.5	Identify reasons why vocational instructors are leaving the field of education (higher pay, more benefits from industry, burnout).	4.7368
20	Study the possible funding gap between high school and area school programs.	4.7838
21	Conduct a comparative study of the quality of education received in an area school versus a comprehensive high school.	4.8421
22	Conduct a follow-up of handicapped students who have completed a vocational program to determine the rate of employment and type of employment.	4.9211
23	Conduct a comparative study of vo-tech graduates and graduates with no vo-tech training or training from the private sector.	4.9737
24	Identify the minimum standards that are not being met in comprehensive high school vocational programs.	5.0270
25	Describe the "state-of-the-art" of teachers' professional activities.	5.1714
26	Construct a profile of the type of student who could best benefit from individualized instruction.	5.2632
27	Analyze the cost-effectiveness of broadcasting telecourses via satellite or cable as a way of expanding program offerings.	5.5263
28	Assess the feasibility of television conferencing with teachers.	5.8108
29.5	Conduct a follow-up of persons who received vocational training in an inmate training center and later returned to prison.	6.0541
29.5	Survey attitudes of students toward employment in home economics related occupations.	6.0541
31	Survey members of Future Homemakers of America to determine their attitudes toward the competitive activities in other youth organizations.	6.1622
32	Determine if there is a strong correlation between Maslow's hierarchy of needs level for students and their grade point average.	6.3421
33	Identify insurance companies in Oklahoma that will <u>not</u> insure cooperative students under age 18.	6.5789

Write the rank number of the concern and your reason for raising or lowering the ranking.

Present Rank No.: _____

Preferred Ranking: _____

Reason for Ranking Change:

Present Rank No.: _____

Preferred Ranking: _____

Reason for Ranking Change:

It was suggested that the following researchable problems be added to the list. Please indicate where you would place each item in the preceding list based on impact on program improvement:

"Identify SDVTE's staffing needs for the next five years."
Ranking: _____

"Identify methods by which vocational education can best utilize computer-based instruction."
Ranking: _____

"Research the effectiveness of using Planning Division's data to determine the types of programs to be funded."
Ranking: _____

PAGE